

11 Publication number:

0 601 619 A3

(12)

EUROPEAN PATENT APPLICATION

21 Application number: 93203046.3

(1) Int. Cl.⁶: **A61K** 47/48, A61K 9/51, A61K 49/04

2 Date of filing: 30.10.93

3 Priority: 04.12.92 US 985424

Date of publication of application: 15.06.94 Bulletin 94/24

Designated Contracting States:
 AT BE CH DE DK ES FR GB GR IE IT LI LU MC
 NL PT SE

Date of deferred publication of the search report:
 02.11.95 Bulletin 95/44

Applicant: EASTMAN KODAK COMPANY 343 State Street Rochester, New York 14650 (US)

Inventor: Na, George C., c/o STERLING WINTHROP INC.
Patent Department,
90 Park Avenue
New York,
New York 10016 (US)
Inventor: Rajagopalan, Natarajan, c/o
STERLING WINTHROP INC.
Patent Department,
90 Park Avenue
New York,
New York 10016 (US)

Representative: Haile, Helen Cynthia et al Kodak Limited
Patent Department
Headstone Drive
Harrow,
Middlesex HA1 4TY (GB)

- Use of non-ionic cloud point modifiers to minimize nanoparticle aggregation during sterilization.
- (37) A composition comprising nanoparticles having a surface modifier adsorbed on the surface thereof and a non-ionic cloud point modifier associated therewith, which cloud point modifier is present in an amount sufficient to increase the cloud point of the surface modifier and methods of making such nanoparticles is described. A preferred surface modifier is a poloxamine such as Tetronic 908, and preferred non-ionic cloud point modifiers include polyethylene glycol, propylene glycol, ethanol, hydroxypropylcyclodextrin and/or glycerol.



EUROPEAN SEARCH REPORT

Application Number EP 93 20 3046

E EP-A-0 600 532 (STERLING WINTHROP INC.) 12 1-11 A61K47/48 A61K9/51 A61K49/04		DOCUMENTS CONSID			
August 1992	Category				CLASSIFICATION OF THE APPLICATION (Int.CL5)
June 1994 * claims * E EP-A-0 602 700 (STERLING WINTHROP INC.) 22 June 1994 * page 5, line 44 - line 56; claims * E EP-A-0 605 024 (STERLING WINTHROP INC.) 6 July 1994 * page 3 * * page 5, line 47 - line 52 * E EP-A-0 602 702 (STERLING WINTHROP INC.) 22 June 1994 * column 2, line 14 - column 3, line 40 * A WO-A-90 15593 (YTKMISKA INSTITUTET) 27 December 1990 * page 7, line 18 - page 9, line 14; claims * X EP-A-0 012 523 (AMERICAN HOME PRODUCTS CO.) 25 June 1980 * page 6, line 6 - line 19; claims * E EP-A-0 577 215 (STERLING WINTHROP INC.) 5 January 1994 * page 3, line 33 - page 4, line 19; claims * The present search report has been drawn up for all claims The HAGUE The present search report has been drawn up for all claims THE HAGUE The present search report has been drawn up for all claims THE HAGUE The present search report has been drawn up for all claims The present search r	E	August 1992 * page 3, line 2 - 1	•	1-11	A61K9/51
June 1994 * page 5, line 44 - line 56; claims * E	E	June 1994	LING WINTHROP INC.) 15	1-11	
July 1994 * page 3 * * page 5, line 47 - line 52 * EP-A-0 602 702 (STERLING WINTHROP INC.) 22 June 1994 * column 2, line 14 - column 3, line 40 * MO-A-90 15593 (YTKMISKA INSTITUTET) 27 December 1990 * page 7, line 18 - page 9, line 14; claims * X EP-A-0 012 523 (AMERICAN HOME PRODUCTS CO.) 25 June 1980 * page 6, line 6 - line 19; claims * EP-A-0 577 215 (STERLING WINTHROP INC.) 5 January 1994 * page 3, line 33 - page 4, line 19; claims * / The present search report has been drawn up for all claims Place of search THE HAGUE CATEGORY OF CITED DOCUMENTS X: particularly relevant if taken alone Y: particularly relevant if combined with another Secument of the same stategory T: theory or principle underlying the invention E: earlier patent document, but published on, or after the filling date D: document cited in the application L: document cited for other reasons	E	June 1994	•	1-11	
June 1994 * column 2, line 14 - column 3, line 40 * WO-A-90 15593 (YTKMISKA INSTITUTET) 27 December 1990 * page 7, line 18 - page 9, line 14; claims * EP-A-0 012 523 (AMERICAN HOME PRODUCTS CO.) 25 June 1980 * page 6, line 6 - line 19; claims * EP-A-0 577 215 (STERLING WINTHROP INC.) 5 January 1994 * page 3, line 33 - page 4, line 19; claims * -/ The present search report has been drawn up for all claims Place of search THE HAGUE CATEGORY OF CITED DOCUMENTS X: particularly relevant if caken alone Y: particularly relevant if combined with another secument of the same focument of the	E	July 1994 * page 3 *		1-11	
December 1990 * page 7, line 18 - page 9, line 14; claims * EP-A-0 012 523 (AMERICAN HOME PRODUCTS CO.) 25 June 1980 * page 6, line 6 - line 19; claims * EP-A-0 577 215 (STERLING WINTHROP INC.) 5 January 1994 * page 3, line 33 - page 4, line 19; claims * The present search report has been drawn up for all claims Place of search THE HAGUE The HAGUE CATEGORY OF CITED DOCUMENTS X: particularly relevant if taken alone Y: particularly relevant if combined with another socument of the same category T: document cited in the application L: document cited in the application	E	June 1994	-	1-11	
CO.) 25 June 1980 * page 6, line 6 - line 19; claims * EP-A-0 577 215 (STERLING WINTHROP INC.) 5 January 1994 * page 3, line 33 - page 4, line 19; claims * -/ The present search report has been drawn up for all claims Place of search THE HAGUE CATEGORY OF CITED DOCUMENTS X: particularly relevant if taken alone Y: particularly relevant if tombined with another of comment of the same category T: theory or principle underlying the invention E: earlier partent document, but published on, or after the filling date D: document cited for other reasons	A	December 1990 * page 7, line 18 -	•	1-11	A61K
January 1994 * page 3, line 33 - page 4, line 19; claims * -/ The present search report has been drawn up for all claims Place of search THE HAGUE CATEGORY OF CITED DOCUMENTS X: particularly relevant if combined with another socument of the same category T: theory or principle underlying the invention E: earlier patent document, but published on, or after the filing date D: document cited in the application L: document cited for other reasons	х	CO.) 25 June 1980		1,2	
The present search report has been drawn up for all claims Place of search THE HAGUE CATEGORY OF CITED DOCUMENTS X: particularly relevant if taken alone Y: particularly relevant if combined with another socument of the same category The present search report has been drawn up for all claims Date of completion of the search Examinar T: theory or principle underlying the invention E: earlier patent document, but published on, or after the filing date D: document cited in the application L: document cited for other reasons	E	January 1994 * page 3, line 33 - 1	•	1	
Place of search THE HAGUE 5 September 1995 Berte, M CATEGORY OF CITED DOCUMENTS X: particularly relevant if taken alone Y: particularly relevant if combined with another document of the same category T: theory or principle underlying the invention E: earlier patient document, but published on, or after the filing date D: document cited in the application L: document cited for other reasons			-/		
THE HAGUE 5 September 1995 Berte, M CATEGORY OF CITED DOCUMENTS X: particularly relevant if taken alone Y: particularly relevant if combined with another document of the same category T: theory or principle underlying the invention E: earlier patent document, but published on, or after the filling date D: document cited in the application L: document cited for other reasons		The present search report has been	n drawn up for sil claims		
CATEGORY OF CITED DOCUMENTS T: theory or principle underlying the invention E: earlier patent document, but published on, or after the filing date Y: particularly relevant if combined with another 60cument of the same category T: theory or principle underlying the invention E: earlier patent document, but published on, or after the filing date D: 60cument cited in the application L: 40cument cited for other reasons		Place of search	Date of completion of the search		Economic
X: particularly relevant if taken alone Y: particularly relevant if combined with another Comment of the same category E: earlier patent document, but published on, or after the filling date C: document cited in the application L: document cited for other reasons		THE HAGUE	5 September 1995	Ber	te, M
A: technological background O: non-written disclosure A: member of the same patent family, corresponding	X : part Y : part doct A : tech	ticularly relevant if taken alone ticularly relevant if combined with anoth ument of the same category anological background	E : earlier patent doc after the filling di cr D : document cited in L : document cited fo	nument, but publication the application or other reasons	ished on, or



EUROPEAN SEARCH REPORT

Application Number EP 93 20 3046

	DOCUMENTS CONSI				
Category	Citation of document with i of relevant pa	ndication, where appropriate,	Relevant to chaim	CLASSIFICATION OF THE APPLICATION (Int.CL5)	
E	wO-A-94 02122 (UNIV February 1994	PERSITY OF NOTTINGHAM) 3 - page 6, line 6; claims	to chaim	TECHNICAL FIELDS SEARCHED (Int.Cl.5)	
	The present search report has	been drawn un for all claims			
	Place of search	Date of completion of the search		Econtaer	
	THE HAGUE	5 September 1995	Ber	te, M	
X:par Y:par doo A:tec	CATEGORY OF CITED DOCUME ticularly relevant if taken alone ticularly relevant if combined with an ument of the same category honological background n-written disclosure	E : earlier patent dot strer the filing di other D : document cited fi L : document cited fi	T: theory or principle underlying the invention E: earlier patent document, but published on, or after the filing date D: document cited in the application L: document cited for other reasons A: member of the same patent family, corresponding		